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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Applicant : Yasuyuki ENDO

Group Art Unit No. :1625

Appln. No : 09/868,934
(National Stage of PCT/JP00/00285)

Examiner : Unknown

I.A Filed : January 21, 2000

For : DICARBA-closo-DODECABORANE DERIVATIVES

INFORMATION DISCLOSURE STATEMENT

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, 1.97, and 1.98, Applicant hereby brings the following information to the attention of the Examiner in charge of the above-identified application, which includes information cited and discussed in International Search Report, the Written Opinion and the International Preliminary Examination Report issued in connection with counterpart International Application No. PCT/JP00/00285. Copies of the International Search Report (in English and Japanese), the Written Opinion (in Japanese) and the International Preliminary Examination Report (in English) were enclosed with the papers when entering the National Stage on July 18, 2001. The Examiner is invited to review these materials to inspect the relevance indicated during international examination with respect to the documents cited therein.

Applicant notes that the Notification of Acceptance indicates that the U.S. Patent and Trademark Office has received copies of the references cited in the International Search Report.

Therefore, copies of the below-noted documents are not being submitted herewith. The Examiner is accordingly requested to consider each of these documents, and to make them of record in this application by initialing in the appropriate spaces on the attached Form-1449. Applicant respectfully requests that the Examiner include a copy of the initialed Form PTO-1449 with the next communication from the U.S. Patent and Trademark Office. If the Examiner needs additional copies of any of the documents, the Examiner is requested to contact the undersigned. For the Examiner's convenience, the documents are listed below.

JP 5-163296, accompanied by an English language abstract;

JP 55-154982, accompanied by an English language abstract;

EP 205326 A2;

Endo Y. et al., "Structure-activity study of estrogenic agonists bearing dicarba-closo-dodecaborane. Effect of geometry and separation distance of hydroxyl groups at the ends of molecules", Bioorg. Med. Chem. Lett., Vol. 9, No. 23, pp. 3313-3318 (1999);

Endo Y. et al., "Estrogenic antagonists bearing sicarba-closo-dodecaborane as a hydrophobic pharmacophore", Bioorg. Med. Chem. Lett., Vol. 9, No. 24, pp. 3387-3392 (1999);

Endo Y. et al., "Potent estrogenic agonists bearing dicarba-closo-dodecaborane as a hydrophobic Pharmacophore", J. Med. Chem., Vol. 42, No. 9, pp. 1501-1504 (1999);

Endo Y et al., "Dicarba-closo-dodecaboranes as pharmacophore. Novel potent retinoidal agonists", Cham. Pharm. Bull., Vol. 47, No. 4, pp. 585-587 (1999);

Iijima T. et al., "Dicarba-closo-dodecaboranes as a pharma-cophore. Retinoidal antagonists and potential agonists", Chem. Pharm. Bull., Vol. 47, No. 3, pp. 398-404 (1999);

Fox M.A. et al., "Transmission of electronic effects by icosahedral carboranes; skeletal carbon-13 chemical shifts and ultraviolet-visible spectra of substituted aryl-p-carboranes (1,12-dicarba-closo-dodecaboranes)", J. Chem. Soc., Dalton Trans., No. 3, pp. 401-411 (1998);

Colquhoun H.M. et al., "Polyetherketones based on para-carborane: synthesis, sulfonation, and membrane-forming characteristics", Polymer, Vol. 38, No. 17, pp. 4539-4546 (1997);

Prashar J.K. et al., "Synthesis of Carboranyl Phenylalanine for potential use in neutron capture therapy of melanoma", J. Chem. Soc. Perkin. Trans., No. 9, pp. 1051-1053 (1993);

Brown D.A. et al., "Polymers and ceramics based on icosahedral carboranes, model studies of the formation and hydrolytic stability of aryl ether, ketone, amide, and boron linkages between carborane units", J. Mater. Chem., Vol. 2, No. 8, pp. 793-804 (1992);

Nemoto H. et al., "The first alkylation of o-carboranes under essentially neutral conditions. Application to the synthesis of B carriers", J. Org. Chem., Vol. 55, No. 25, pp. 6065-6066 (1990);

Chemical Abstracts, Vol. 89, No. 196733;

Chemical Abstracts, Vol. 89, No. 6351;

Matochkin V.S. et al., "Molecular mobility in polyarylates having difenylcarborane fragments in the chain", Faserforsch. Textiltech., Bol. 26, No. 6, pp. 261-265 (1975);

Chemical Abstracts, Vol. 82, No. 17164;

Valetsii P.M. et al., "Polyamides of 1,7-bis (p-carboxy-phenyl) carborane", Vysokomol. Soedin., Ser. A, Vol. 15, No. 6, pp. 1227-33 (1973);

Chemical Abstracts, Vol. 76, No. 46645;

Chemical Abstracts, Vol. 65, No. 98063;

Zakharkin L.I. et al., "Ionization constants of 1-(p-and m-carboxyphenyl)-2-substituted o-carboranes", Xh. Obshch. Khim., Vol. 41, No. 6, pp. 1300-1303 (1971);

Chemical Abstracts, Vol. 71, No. 39047;

Chemical Abstracts, Vol. 68, No. 39684;

Chemical Abstracts, Vol. 66, No. 95101;

Chemical Abstracts, Vol. 65, Par. No. 16989,f-g;

Chemical Abstracts, Vol. 65, Par. No. 10604,g-h;

Chemical Abstracts, Vol. 64, Par. No. 11235,d-h; and

Chemical Abstracts, Vol. 63, Par. No. 17865,f-h.

Applicant notes that the International Search Report lists U.S. Patent No. 4,824,659 as a family member of EP 205326 A2. A copy of this document is also enclosed.

Copies of the English language abstracts of JP 5-163296 and JP 55-154982 and U.S. Patent No. 4,824,659 are enclosed together with a duly completed Form PTO-1449. The